

Technology Transfer Conference

Ljubljana 2011

Technology Transfer

Experiences at Philips

and it's Spinoff's

Leon Tossaint
former VP Philips Consumer Electronics
Honourable Board Member SFPO

Royal Philips Electronics

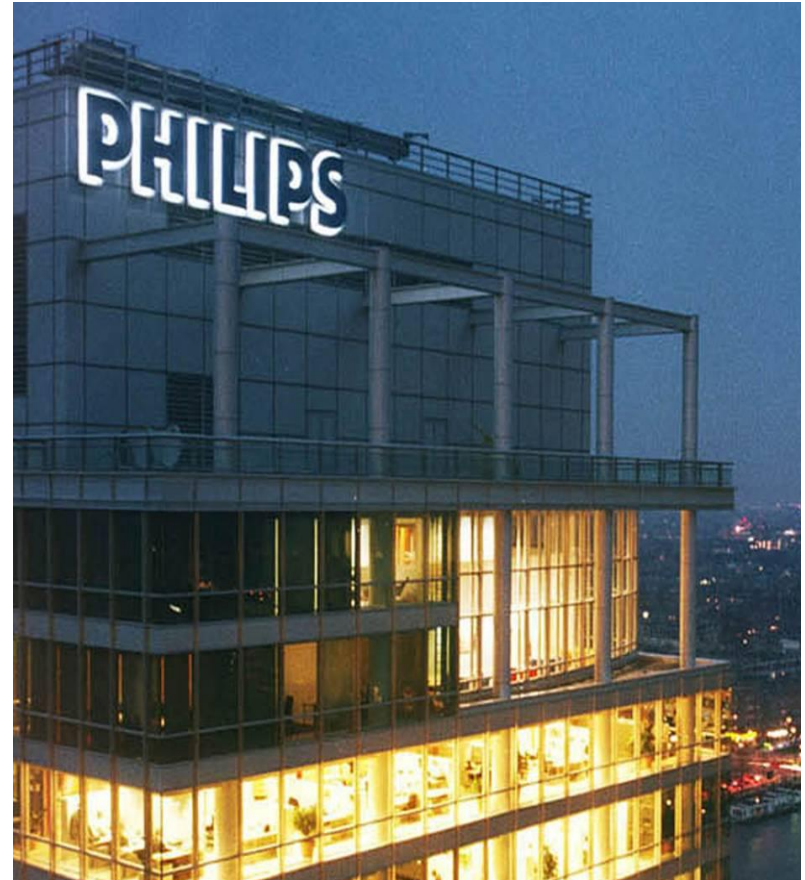
- **Founded in 1891 by Gerard and Anton Philips**
- **One of the largest global electronics companies with sales of around € 26 Billion**
- **Profitable : € 1.446 million in 2010**
- **Multinational workforce of around 120.000 employees**
- **Active in the areas of Healthcare, Consumer Lifestyle and Lighting**
- **Present in over 60 countries**

**Headquarters:
Amsterdam, The
Netherlands**



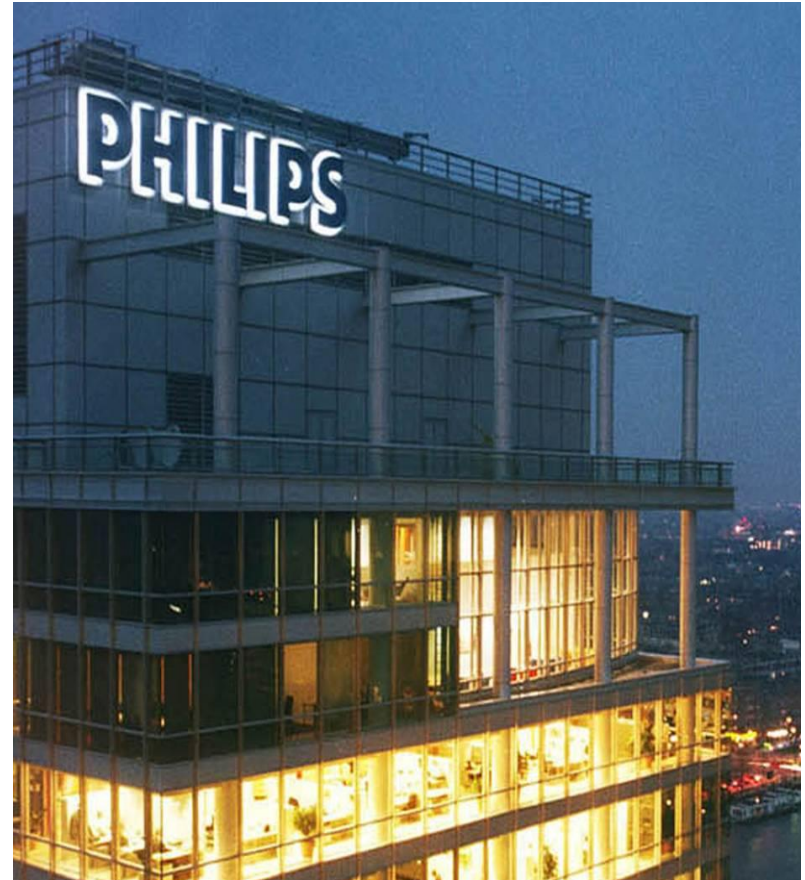
Philips

- is everywhere you go on the planet : products are sold in 200 countries
- is ranked in the 'top 50' of world leading brands
- is ranked in the global 'top 50' list of 'Worlds Most Attractive Employers'
- is ranked in 2010 by Dow Jones as the global leader in sustainability
- is a global top 3 player in healthcare
- is number 1 in the global lighting market (50% bigger than nr 2)
- is number 1 globally in electric shavers
- is global market leader in automotive lighting



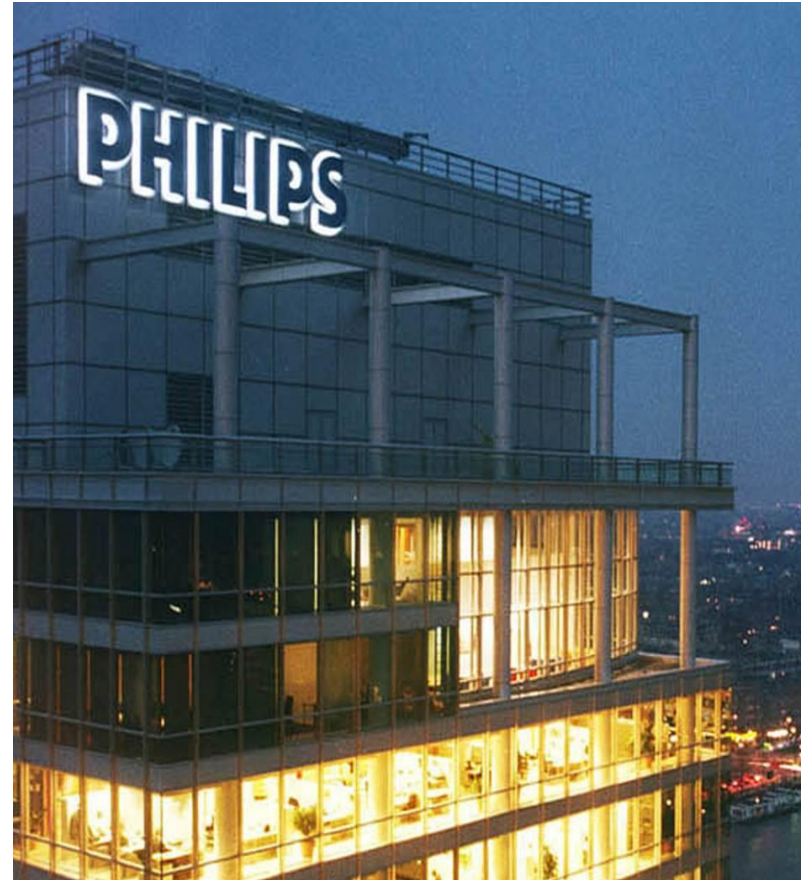
Philips, main Inventions

- **Compact Audio Cassette** invented in **1962**, which became world standard
- **Video Cassette**, 'Video 2000', technically superior, VHS with better marketing became world standard
- **Compact Disc (CD)**, in **1982** together with **Sony**, became world standard
- **Digital Video Disc (DVD)**, in **1995**, together with the entire computer and Consumer Electronic Industry
- **Blu-ray Disk**, primarily developed by **Philips and Sony**
- **Ambilight TV**, unique for Philips in high-end TV market



Philips Research

- **Founded in 1914**
- **One of the world's largest Corporate Research Organisations**
- **Over 1500 professionals, 50 nationalities**
- **Over 130.000 patents created : at least 1 patent filed per scientist per year**
- **Annual Research budget, around 1% of Philips' annual sales (= € 250 M)**
- **Philips total R&D investment in 2010 € 1.6 Billion**



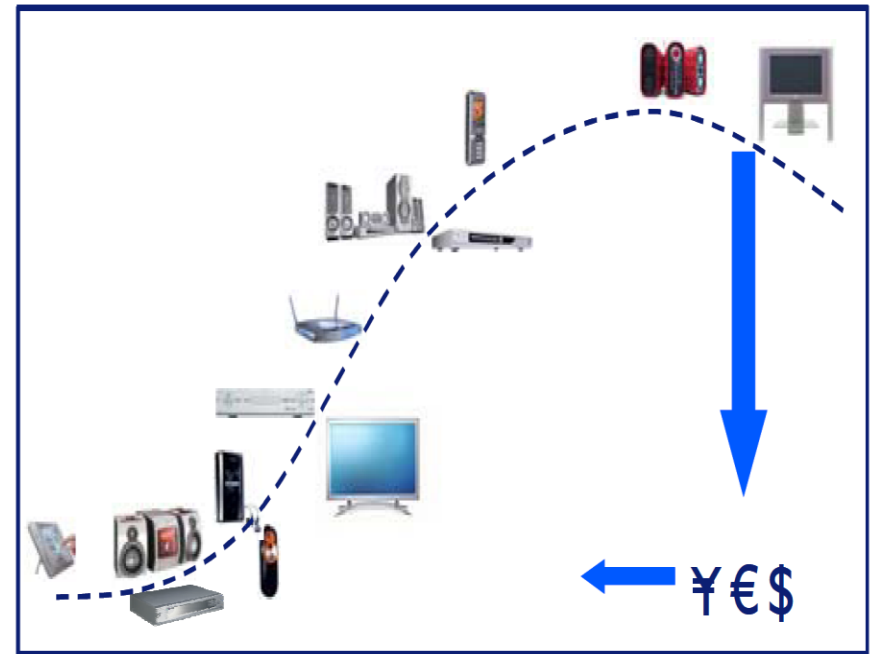
During the 100 years' Philips Research many Technology Changes have occurred

Philips' example : Technology Change 'From Hardware to Software'

- **Early 90'th Philips R&D dominant Hardware oriented**
- **Board decided for change : appointed Frank Carrubba (HP/IBM) as Board Member for R&D**
- **'Software Task-Force' installed to build (embedded) SW capabilities, SW engineering skills, and to strengthen the SW Engineering Community**
- **Structure and discipline in SW development was needed : CMM standard (SEI) has been adopted**
- **'Top management Awareness' : Watts Humphrey (SEI) invited**
- **Quality of software –embedded in all Philips' products- increased drastically**
- **Major learning : commercializing SW as application/service**

Technology Management at Philips Consumer Electronics

- **Technology Strategy translated into Technology Roadmaps**
- **Decide on 'Make-, Partner-, Buy-' Technologies**
- **Technology Roadmaps translated into Product Portfolios : Lifecycle Management**
- **Technology projects defined, partnering with Universities and Research Institutes**



Lifecycle management: Invest R&D in early stages for scale / margin; milk & de-risk mature categories

Philips' Technology Spin-off : **ASML** lithography technology for IC manufacturing

- Started as a small unit at Philips Research facility (1984) and Philips invested in Research, maturing technology, growing capacity and globalization

Necessity to 'spin-off' to make ASML independent :

- Would not survive in Philips : no core business
- Needed a different entrepreneurial spirit
- Needed Venture Capital to expend into the global market

ASML now :

- World leader in IC Machines, from all computer chips made worldwide 60% is on ASML machines
- Multinational, € 4.5 B turnover, € 1 B profit with 7000 employees (2010)

Philips Research, Technology Transfer, 'Open Innovation'



- 'Open Innovation' : sharing expertises and technical abilities with Universities, Institutes and other Companies
- 'Inside-out' innovation making our skills and resources available to the outside world (e.g. contract research)
- 'Outside-in' innovation, drawing on the capabilities of individuals, start-up's, organisations, around the globe
- In addition continuous looking for new sources for innovations, we are now experimenting strategies like : 'crowd sourcing' and 'social networking'.

Philips Research, core of the High Tech Campus Eindhoven

High Tech Campus Eindhoven

Philips initiated in 2007 the High Tech Campus Eindhoven on the premises of Philips Research and invested € 500 M.

Companies which joined : ASML, NXP, Atos Origin, TNO, TU/e, etc.

High Tech Campus Eindhoven now :

- 90 Companies, dynamic mix of global and SME Companies and innovative institutions
- 8000 researchers and developers, 50 nationalities
- 200.000 m² meter R&D facilities (labs, clean rooms etc) and 12.000 m² available for 'start-ups'
- 'Open Innovation' is the preferred work approach
- good for 50% of all patent requests in the Netherlands
- One of the world largest Science Parks

This Campus is the kernel of one of Europe's leading R&D Regions :

BRAINPORT EINDHOVEN

Brain Port Eindhoven

Region Brain Port Eindhoven is a breeding ground for Innovation and home base for innovative world-class Companies, R&D Institutes, Universities,
Core : Philips, ASML, NXP, TomTom, Design Academy, TNO, Benteler,
High Tech Campus Eindhoven, High Tech Automotive Campus Helmond
University Triangle : Eindhoven/Leuven/Aachen

Brain Port Eindhoven:

- Belong to the top 3 Regions in Europe on patent density
- Over 50% of all Dutch patents come from this Region
- Over 50.000 FTE's in high tech R&D / automotive / high tech service
- Largest share of all Dutch private R&D expenses (36%)
- 8% of BRP (Bruto Regional Product) on R&D, unique in Europe, exceeding the 3% European target

Brain Port Eindhoven has 3 years in a row be named :
‘Top Seven Intelligent Community of the year’ (ICF)



High Tech Automotive Campus

The High Tech Automotive Campus was founded June 2009 in the City of Helmond around the R&D centers of Benteler, TNO and TÜV.

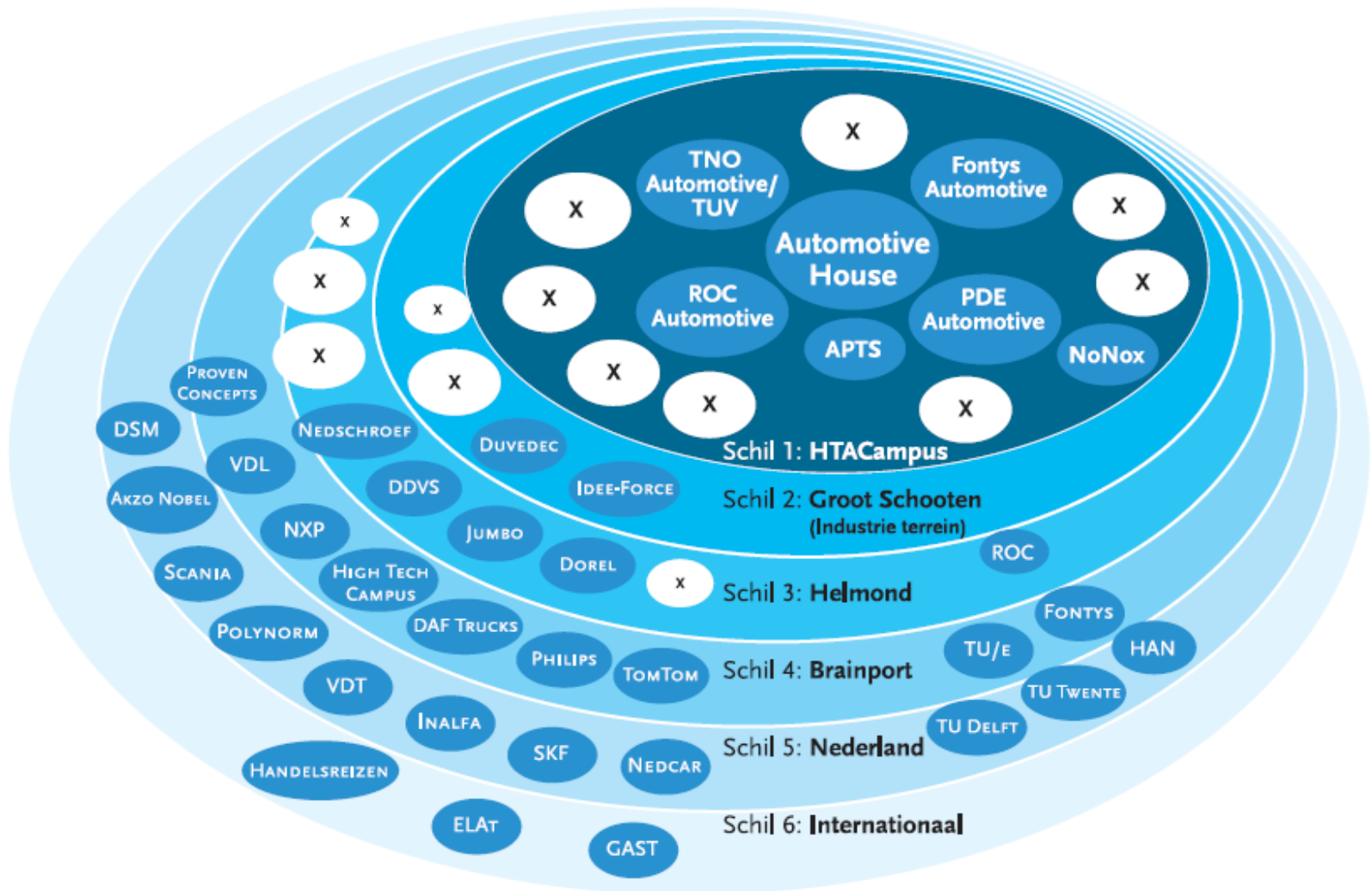
The HTACampus is part of the Brainport Region



High Tech Automotive Campus now :

- > 20 Companies, active in automotive research, engineering prototype build, testing and education
- > 500 researchers and developers, aiming for 1500 in 2018
- World class test facilities: Electric vehicle lab, Driving guidance and mobility lab, full scale crash facility, High altitude climate chamber, Powertrain centers, Safety labs, etc.
- Open Innovation through close co-operation between companies
- Tipple Helix: Industry, Government, Education
- Education facilities for Vocational and Bachelor education. Close co-operation with TU/e

High Tech Automotive Campus part of Brainport Eindhoven



Brainport Eindhoven Rewarded : Intelligent Community of the year 2011 ICF's Global Award

Report on Intelligent Community Awards Criteria :

- **Lowest cost for broadband connection : \$ 2.41 per Mb
highest score on broadband accessibility,**
- **Highest score on job creation (20% of all workforce in last
36 months), highest score on employment and education,**
- **Promoting new media/innovation : ‘Open Innovation
Festival’**
- **Brainport is the Innovation Engine of the Netherlands,
one third of Dutch R&D spend comes from Brainport.**
- **Innovative healthcare organizations,
e.g. Philips invests € 1.6 B in R&D
(including healthcare division)**



Global Competitiveness Report WEF

Innovation criteria

The Netherlands

	Rank		
	2010/11	2011/12	Trend
Innovation (total cluster)	13	12	↑
Capacity for Innovation	10	10	--
Quality of Scientific Research Institutions	9	8	↑
Company spending on R&D	15	14	↑
University-Industry collaboration in R&D	11	8	↑
Availability of Scientists and Engineers	22	17	↑
Patents granted / million population	13	13	--
FDI and Technology Transfer	33	31	↑

Global Competitiveness Report WEF

Innovation criteria

Slovenia

	Rank		
	2010/11	2011/12	Trend
Innovation (total cluster)	34	40	↓
Capacity for Innovation	22	28	↓
Quality of Scientific Research Institutions	32	33	--
Company spending on R&D	32	39	↓
University-Industry collaboration in R&D	37	46	↓
Availability of Scientists and Engineers	73	89	↓
Patents granted / million population	27	26	↑
FDI and Technology Transfer	101	122	↓

Improving Innovation & Technology Transfer a major challenge for Slovenia

SFPO

**Slovenian Foundation for Business Excellence
supports this crucial drive :**

**SFPO Conference on 28 September 2011
'Knowledge for the Economy'**



Thank you

Léon Tossaint

EFQM 
Licenced Advisor 2011